

More Functions Practice problems

Write C++ function(s) to carry out the specified tasks. For each problem, also write suggested application program(s) that apply the function.

- (1) Write a function `multiPrint(int n, char c)` that prints `n` copies of a character `c`. Apply the function in programs to print triangles, upside down triangles, and diamonds.
- (2) Write a function `isPrime` to test whether a parameter is prime. Apply the function in a program which prints all the prime numbers up to 100.
- (3) Write a function `max3` which uses 3 parameters and returns the value of the largest. Test the function in a program that determines the largest of 3 quiz scores.
- (4) Write a function `quadratic (int a, int b, int c, double x)` which calculates the value of the quadratic:

$$a x^2 + b x + c$$

- (5) Write a function `fibonacci (int n)` which calculates the `n`th Fibonacci number. Write a main program that uses this function and the function from problem 2 to print out the first 5 Fibonacci numbers that are also prime.
- (6) Write a function `factorIt (int n)` that writes out the prime factorization of an integer parameter.